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Official Study Guide

16th Edition

Principles of Microeconomics

College-Level Examination Program®

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Principles of Microeconomics

Description of the Examination

The Principles of Microeconomics examination covers material that is usually taught in a one-semester undergraduate course in introductory microeconomics. This aspect of economics deals with the principles of economics that apply to the analysis of the behavior of individual consumers and businesses in the economy. Questions on this exam require candidates to apply analytical techniques to hypothetical as well as real world situations and to analyze and evaluate economic decisions. Candidates are expected to demonstrate an understanding of how free markets work, and allocate resources efficiently. They should understand how individual consumers make economic decisions to maximize utility, and how individual firms make decisions to maximize profits. Candidates must be able to identify the characteristics of the different market structures and analyze the behavior of firms in terms of price and output decisions. They should also be able to evaluate the outcome in each market structure with respect to economic efficiency, and identify cases in which private markets fail to allocate resources efficiently, and how government intervention fixes or fails to fix the resource allocation problem. It is also important to understand the determination of wages and other input prices in factor markets, and analyze and evaluate the distribution of income.

The examination contains 80 questions to be answered in 90 minutes. Some of these are pretest questions that will not be scored. Any time candidates spend on tutorials and providing personal information is in addition to the actual testing time.

Knowledge and Skills Required

Questions on the Principles of Microeconomics examination require candidates to demonstrate one or more of the following abilities:

- Understanding of important economic terms and concepts
- Interpretation and manipulation of economic graphs
- Interpretation and evaluation of economic data
- Application of simple economic models

The subject matter of the Principles of Microeconomics examination is drawn from the following topics. The percentages next to the main topics indicate the approximate percentages of exam questions on those topics.

8–12% Basic economic concepts

Scarcity: the nature of economic systems
Opportunity costs and productive possibilities
Comparative advantage

60–70% The nature and function of the product market

15–20% Supply and demand
- Price and quantity demanded
- Basic implementation of policy

10–15% Consumer demand
- Consumer choice: utility and demand theory
- Elasticity

10–15% Firm's production, costs, and revenue
- Marginal product and diminishing returns
- Total, average, and marginal costs and revenue
- Long-run costs and economies of scale

25–30% Profit-maximization: Pricing, revenue, and output, both in the long run and the short run and in the firm and the market
- Perfect competition
- Imperfect competition
- Monopoly
- Oligopoly and monopolistic competition
- Efficiency, antitrust, and regulation

10–15% Factor market

Derived demand
Determination of wages and other factor prices
Distribution of income

4–6% Market failures and the role of government

Externalities
Public good
Information economics

Sample Test Questions

The following questions are provided to give an indication of the types of questions that appear on the Principles of Microeconomics examination. CLEP examinations are designed so that average students completing a course in the subject can usually answer about half the questions correctly.

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that is best in each case.

<u>Questions 1– 2</u> are based on the following table.

PRODUCTION FUNCTION

(Figures in body of table represent amounts of output.)

Units of Labor	Units of Capital 1	2	3	4	5	6
1	141	200	245	282	316	346
2	200	282	346	400	448	490
3	245	346	423	490	548	600
4	282	400	490	564	632	692
5	316	448	548	632	705	775
6	346	490	—	692	775	846

1. Information given in the table can be used to illustrate the law of

   (A) diminishing returns
   (B) diminishing demand
   (C) diminishing utility
   (D) supply and demand
   (E) comparative advantage

2. If there are constant returns to scale throughout the production process, the amount of output that can be produced with 3 units of capital and 6 units of labor must be

   (A) 490
   (B) 548
   (C) 600
   (D) 608
   (E) 693

3. Which of the following best states the law of comparative advantage?

   (A) Differences in relative costs of production are the key to determining patterns of trade.
   (B) Differences in absolute costs of production determine which goods should be traded between nations.
   (C) Tariffs and quotas are beneficial in increasing international competitiveness.
   (D) Nations should not specialize in the production of goods and services.
   (E) Two nations will not trade if one is more efficient than the other in the production of all goods.

4. If a retail firm plans to increase the price of a product it sells, the firm must believe that

   (A) the good is an inferior good
   (B) the price of complements will also increase
   (C) the price of substitutes will decrease
   (D) demand for the product is perfectly price elastic
   (E) demand for the product is price inelastic

5. If it were possible to increase the output of both military goods and consumption goods, which of the following statements about the economy would be true?

   (A) The economy is inefficient and inside the production possibilities curve.
   (B) The economy is inefficient and on the production possibilities curve.
   (C) The economy is efficient and on the production possibilities curve.
   (D) The economy is efficient and inside the production possibilities curve.
   (E) The economy is efficient and outside the production possibilities curve.

6. Which of the following would necessarily cause a decrease in the price of a product?

(A) An increase in the number of buyers and a decrease in the price of an input
(B) An increase in the number of buyers and a decrease in the number of firms producing the product
(C) An increase in average income and an improvement in production technology
(D) A decrease in the price of a substitute product and an improvement in production technology
(E) A decrease in the price of a substitute product and an increase in the price of an input

7. Agricultural price supports will most likely result in

(A) shortages of products if the price supports are above the equilibrium price
(B) shortages of products if the price supports are at the equilibrium price
(C) surpluses of products if the price supports are above the equilibrium price
(D) surpluses of products if the price supports are below the equilibrium price
(E) a balance between quantity demanded and quantity supplied if the price floor is above the equilibrium price

8. The market equilibrium price of home heating oil is $1.50 per gallon. If a price ceiling of $1.00 per gallon is imposed, which of the following will occur in the market for home heating oil?

I. Quantity supplied will increase.
II. Quantity demanded will increase.
III. Quantity supplied will decrease.
IV. Quantity demanded will decrease.

(A) II only
(B) I and II only
(C) I and IV only
(D) II and III only
(E) III and IV only

9. Assume that a consumer finds that her total expenditure on compact discs stays the same after the price of compact discs declines. Which of the following is true for this consumer over the price range?

(A) Compact discs are inferior goods.
(B) The consumer's demand for compact discs increased.
(C) The consumer's demand for compact discs is perfectly price elastic.
(D) The consumer's demand for compact discs is perfectly price inelastic.
(E) The consumer's demand for compact discs is unit price elastic.

10. An improvement in production technology for a certain good leads to

(A) an increase in demand for the good
(B) an increase in the supply of the good
(C) an increase in the price of the good
(D) a shortage of the good
(E) a surplus of the good

11. If the demand for a product is price elastic, which of the following is true?

(A) An increase in the product price will have no effect on the firm's total revenue.
(B) An increase in the product price will increase the firm's total revenue.
(C) A decrease in the product price will increase the firm's total revenue.
(D) A decrease in the product price will decrease the firm's rate of inventory turnover.
(E) A decrease in the product price will decrease the total cost of goods sold.

12. If an increase in the price of good X causes a decrease in the demand for good Y, good Y is

(A) an inferior good
(B) a luxury good
(C) a necessary good
(D) a substitute for good X
(E) a complement to good X

13. The demand curve for cars is downward sloping because an increase in the price of cars leads to

    (A) the increased use of other modes of transportation
    (B) a decrease in the expected future price of cars
    (C) a decrease in the number of cars available for purchase
    (D) a increase in the prices of gasoline and other oil-based products
    (E) a change in consumers' tastes in cars

14. Suppose that an effective minimum wage is imposed in a certain labor market. If labor supply in that market subsequently increases, which of the following will occur in that market?

    (A) Unemployment will increase.
    (B) Quantity of labor supplied will decrease.
    (C) Quantity of labor demanded will increase.
    (D) Market demand will increase.
    (E) The market wage will increase.

15. Suppose that Pat buys all clothing from a discount store and treats these items as inferior goods. Pat's consumption of discount-store clothing will

    (A) increase when a family member wins the state lottery
    (B) increase when Pat gets a raise in pay at work
    (C) remain unchanged when Pat's income increases or decreases
    (D) decrease when Pat becomes unemployed
    (E) decrease when Pat experiences an increase in income

16. The primary distinction between the short run and the long run is that in the short run

    (A) firms make profits, but in the long run no firm makes economic profits
    (B) profits are maximized, but in the long run all costs are maximized
    (C) some costs of production are fixed, but in the long run all costs are fixed
    (D) some costs of production are fixed, but in the long run all costs are variable
    (E) marginal costs are rising, but in the long run they are constant

Questions 17–19 are based on the table below, which shows a firm's total cost for different levels of output.

Output	Total Cost
0	$24
1	33
2	41
3	48
4	54
5	61
6	69

17. Which of the following is the firm's marginal cost of producing the fourth unit of output?

    (A) $54.00
    (B) $13.50
    (C) $ 7.50
    (D) $ 6.00
    (E) $ 1.50

18. Which of the following is the firm's average total cost of producing 3 units of output?

    (A) $48.00
    (B) $16.00
    (C) $14.00
    (D) $13.50
    (E) $ 7.00

19. Which of the following is the firm's average fixed cost of producing 2 units of output?

    (A) $24.00
    (B) $20.50
    (C) $12.00
    (D) $ 8.00
    (E) $ 7.50

20. Marginal revenue is the change in revenue that results from a one-unit increase in the

    (A) variable input
    (B) variable input price
    (C) output level
    (D) output price
    (E) fixed cost

21. In the short run, if the product price of a perfectly competitive firm is less than the minimum average variable cost, the firm will

    (A) raise its price
    (B) increase its output
    (C) decrease its output slightly but increase its profit margin
    (D) lose more by continuing to produce than by shutting down
    (E) lose less by continuing to produce than by shutting down

22. Suppose that the license paid by each business to operate in a city increases from $400 per year to $500 per year. What effect will this increase have on a firm's short-run costs?

	Marginal Cost	Average Total Cost	Average Variable Cost
(A)	Increase	Increase	Increase
(B)	Increase	Increase	No effect
(C)	No effect	No effect	No effect
(D)	No effect	Increase	Increase
(E)	No effect	Increase	No effect

23. Which of the following statements is true of perfectly competitive firms in long-run equilibrium?

    (A) Firm revenues will decrease if production is increased.
    (B) Total firm revenues are at a maximum.
    (C) Average fixed cost equals marginal cost.
    (D) Average total cost is at a minimum.
    (E) Average variable cost is greater than marginal cost.

24. If an industry has been dumping its toxic waste free of charge into a river, government action to ensure a more efficient use of resources would have which of the following effects on the industry's output and product price?

	Output	Price
(A)	Decrease	Decrease
(B)	Decrease	Increase
(C)	Increase	Decrease
(D)	Increase	Increase
(E)	Increase	No change

25. Assume that a perfectly competitive industry is in long-run equilibrium. A permanent increase in demand will eventually result in

    (A) a decrease in demand because the price will increase and people will buy less of the output
    (B) a decrease in supply because the rate of output and the associated cost will both increase
    (C) an increase in price but no increase in output
    (D) an increase in output
    (E) a permanent shortage, since the quantity demanded is now greater than the quantity supplied

26. Economists are critical of monopolies principally because monopolies

    (A) gain too much political influence
    (B) are able to avoid paying their fair share of taxes
    (C) are unfair to low-income consumers
    (D) lead to an inefficient use of scarce productive resources
    (E) cause international political tension by competing with one another overseas for supplies of raw materials

27. Which of the following statements must be true in a perfectly competitive market?

    (A) A firm's marginal revenue equals price.
    (B) A firm's average total cost is above price in the long run.
    (C) A firm's average fixed cost rises in the short run.
    (D) A firm's average variable cost is higher than price in the long run.
    (E) Large firms have lower total costs than small firms.

28. A perfectly competitive firm produces in an industry whose product sells at a market price of \$100. At the firm's current rate of production, marginal cost is increasing and is equal to \$110. To maximize its profits, the firm should change its output and price in which of the following ways?

	Output	Price
(A)	Decrease	Increase
(B)	Decrease	No change
(C)	No change	Increase
(D)	Increase	No change
(E)	Increase	Decrease

29. The typical firm in a monopolistically competitive industry earns zero profit in long-run equilibrium because

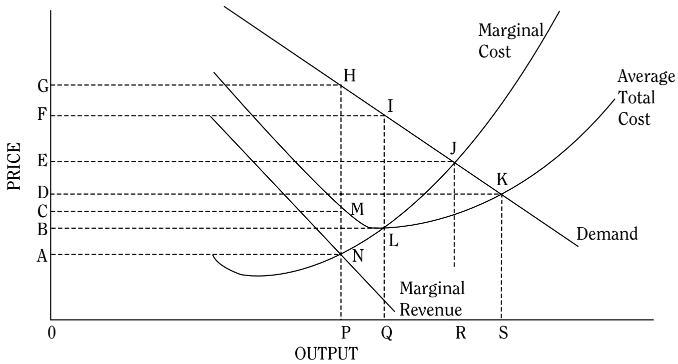
    (A) advertising costs make monopolistic competition a high-cost market structure rather than a low-cost market structure
    (B) there are close substitutes for each firm's product
    (C) there are no significant restrictions on entering or exiting the industry
    (D) the firms in the industry are unable to engage in product differentiation
    (E) the firms in the industry do not operate at the minimum point on their long-run average cost curves

30. In the long run, compared with a perfectly competitive firm, a monopolistically competitive firm with the same costs will have

    (A) a higher price and higher output
    (B) a higher price and lower output
    (C) a lower price and higher output
    (D) a lower price and lower output
    (E) the same price and lower output

31. Which of the following describes what will happen to market price and quantity if firms in a perfectly competitive market form a cartel?

	Price	Quantity
(A)	Decrease	Decrease
(B)	Decrease	Increase
(C)	Increase	Increase
(D)	Increase	Decrease
(E)	Increase	No change



32. The diagram above depicts cost and revenue curves for a firm. What are the firm's profit-maximizing output and price?

	Output	Price
(A)	0S	0D
(B)	0R	0E
(C)	0Q	0F
(D)	0Q	0B
(E)	0P	0G

33. Imperfectly competitive firms may be allocatively inefficient because they produce at a level of output such that

(A) average cost is at a minimum
(B) marginal revenue is greater than marginal cost
(C) price equals marginal revenue
(D) price equals marginal cost
(E) price is greater than marginal cost

34. In a market economy, public goods are unlikely to be provided in sufficient quantity by the private sector because

(A) private firms are less efficient at producing public goods than is the government
(B) the use of public goods cannot be withheld from those who do not pay for them
(C) consumers lack information about the benefits of public goods
(D) consumers do not value public goods highly enough for firms to produce them profitably
(E) public goods are inherently too important to be left to private firms to produce

35. Assume that both input and product markets are competitive. If capital is fixed and the product price increases, in the short run firms will increase production by increasing

(A) capital until marginal revenue equals the product price
(B) capital until the average product of capital equals the price of capital
(C) labor until the value of the marginal product of labor equals the wage rate
(D) labor until the marginal product of labor equals the wage rate
(E) labor until the ratio of product price to the marginal product of labor equals the wage rate

36. In which of the following ways does the United States government currently intervene in the working of the market economy?

I. It produces certain goods and services.
II. It regulates the private sector in an effort to achieve a more efficient allocation of resources.
III. It redistributes income through taxation and public expenditures.

(A) I only
(B) II only
(C) III only
(D) II and III only
(E) I, II, and III

37. If hiring an additional worker would increase a firm's total cost by less than it would increase its total revenue, the firm should

(A) not hire that worker
(B) hire that worker
(C) hire that worker only if another worker leaves or is fired
(D) hire that worker only if the worker can raise the firm's productivity
(E) reduce the number of workers employed by that firm

38. If a firm wants to produce a given amount of output at the lowest possible cost, it should use resources in such a manner that

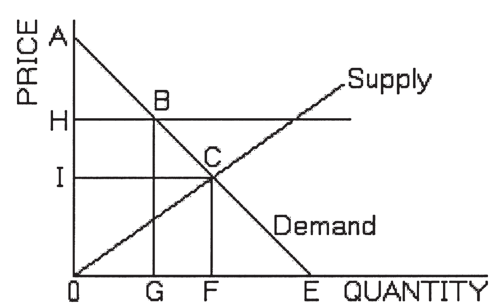
(A) it uses relatively more of the less expensive resource
(B) it uses relatively more of the resource with the highest marginal product
(C) each resource has just reached the point of diminishing marginal returns
(D) the marginal products of each resource are equal
(E) the marginal products per dollar spent on each resource are equal

39. If the firms in an industry pollute the environment and are not charged for the pollution, which of the following is true from the standpoint of the efficient use of resources?

(A) Too much of the industry's product is produced, and the price of the product is higher than the marginal social cost.
(B) Too much of the industry's product is produced, and the price of the product is lower than the marginal social cost.
(C) Too little of the industry's product is produced, and the price of the product is higher than the marginal social cost.
(D) Too little of the industry's product is produced, and the price of the product is lower than the marginal social cost.
(E) The industry is a monopoly.

40. Using equal amounts of resources, Country A can produce either 30 tons of mangoes or 10 tons of bananas, and Country B can produce either 10 tons of mangoes or 6 tons of bananas. Which of the following relationships is consistent with the information above?

(A) Country A Comparative advantage in production of mangoes
Country B Comparative advantage in production of bananas
(B) Country A Comparative advantage in production of bananas
Country B Comparative advantage in production of mangoes
(C) Country A Absolute advantage in production of mangoes
Country B Absolute advantage in production of bananas
(D) Country A Absolute advantage in production of bananas
Country B Absolute advantage in production of mangoes
(E) Country A Comparative disadvantage in production of mangoes
Country B Comparative disadvantage in production of bananas



41. The graph above shows the market for chocolates. Suppose that the government imposes a price floor equal to 0H. After the implementation of the price floor, consumer surplus in this market will be equal to

(A) ABH
(B) ACI
(C) AE0
(D) 0CE
(E) 0IC

42. A firm in monopolistic competition CANNOT do which of the following?

(A) Earn short-run profits.
(B) Advertise its product.
(C) Prevent new firms from entering the market.
(D) Compete by its choice of location.
(E) Set the price for its product.

43. Which of the following is a necessary condition for a firm to engage in price discrimination?

(A) The firm faces a highly elastic demand.
(B) The firm is able to set its own price.
(C) The firm is maximizing its revenue.
(D) Buyers are only concerned about product quality.
(E) Buyers are not fully informed about price.

44. Which of the following is true about the official measure of the poverty-level income for a family of four in the United States?

(A) It is used to determine eligibility for Social Security benefits.
(B) It shows that roughly half of all Americans live in poverty.
(C) It falls when welfare benefits increase.
(D) It is calculated by multiplying the cost of a nutritionally adequate diet by three.
(E) It is not adjusted each year for changes in the cost of living.

45. Which of the following is true if total utility is maximized?

(A) Marginal utility is equal to zero.
(B) Marginal utility is positive.
(C) Marginal utility is negative.
(D) Average utility is maximized.
(E) Average utility is minimized.

46. If the cross-price elasticity of demand between good A and good B is negative, then good A and good B are

(A) substitutes
(B) complements
(C) unrelated
(D) in high demand
(E) in low demand

47. Assume that a firm in a certain industry hires its workers in a perfectly competitive labor market. As the firm hires additional workers, the marginal factor cost is

(A) decreasing steadily
(B) increasing steadily
(C) constant
(D) decreasing at first, then increasing
(E) increasing at first, then decreasing

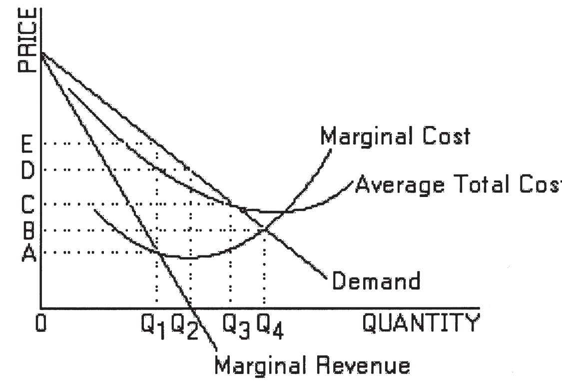
48. A profit-maximizing monopolist will hire an input up to the point at which

(A) marginal factor cost equals marginal revenue product
(B) marginal factor cost equals marginal revenue
(C) average factor cost equals average revenue product
(D) average factor cost equals value of the marginal product
(E) average revenue equals marginal revenue

		Firm B's Choice: Restrict Output	Firm B's Choice: Do not Restrict Output
Firm A's Choice	Restrict Output	\$50, \$50	\$10, \$80
	Do not Restrict Output	\$80, \$10	\$30, \$30

49. The pay-off matrix above gives the profits associated with the strategic choices of two oligopolistic firms. The first entry in each cell is the profit to Firm A and the second to Firm B. Suppose that Firm A and Firm B agree to restrict output, but have no power to enforce that agreement. In the long run, each firm will most likely earn which of the following profits?

	Firm A	Firm B
(A)	\$10	\$80
(B)	\$30	\$30
(C)	\$50	\$50
(D)	\$80	\$10
(E)	\$80	\$80



50. Suppose that the natural monopolist whose cost and revenue curves are depicted above is subject to government regulation. If the government's objective is to make this monopoly produce the socially optimal level of output, it should set price equal to

(A) 0A
(B) 0B
(C) 0C
(D) 0D
(E) 0E

Study Resources

Most textbooks used in college-level introduction of microeconomics courses cover the topics in the outline given earlier, but the approaches to certain topics and the emphasis given to them may differ. To prepare for the Principles of Microeconomics exam, it is advisable to study one or more college textbooks, which can be found in most college bookstores. When selecting a textbook, check the table of contents against the “Knowledge and Skills Required” for this test.

There are many introductory economics textbooks that vary greatly in difficulty. Most books are published in one-volume editions, which cover both microeconomics and macroeconomics; some are also published in two-volume editions, with one volume covering macroeconomics and the other microeconomics. A companion study guide/workbook is available for most textbooks. The study guides typically include brief reviews, definitions of key concepts, problem sets, and multiple-choice test questions with answers. Many publishers also make available computer-assisted learning packages.

To broaden your knowledge of economic issues, you may read relevant articles published in the economics periodicals that are available in most college libraries — for example, *The Economist. The Wall Street Journal* and the *New York Times,* along with local papers, may also enhance your understanding of economic issues. The Internet is another resource you could explore.

Additional suggestions for preparing for CLEP exams are given in “Preparing to Take CLEP Examinations.”

Answer Key

1.	A	26.	D
2.	C	27.	A
3.	A	28.	B
4.	E	29.	C
5.	A	30.	B
6.	D	31.	D
7.	C	32.	E
8.	D	33.	E
9.	E	34.	B
10.	B	35.	C
11.	C	36.	D
12.	E	37.	B
13.	A	38.	E
14.	A	39.	B
15.	E	40.	A
16.	D	41.	A
17.	D	42.	C
18.	B	43.	B
19.	C	44.	D
20.	C	45.	A
21.	D	46.	B
22.	E	47.	C
23.	D	48.	A
24.	B	49.	B
25.	D	50.	B